Muñoz, Enzo R., and Beatriz Mazar Barnett. Atomic Energy Commission, Buenos Aires, Argentina. Sex-linked Recessive Lethal Test with LSD in Drosophila melanogaster sperm.

Many papers were lately published about the harmful effects of LSD on chromosomes of different cellular systems, with contradictory results.

Bearing in mind possible genetic implications we started an extensive study in Drosophila melanogaster. The experiments were designed to test recessive and dominant lethality and translocation frequency at different stages of gametogenesis. Our first results correspond to sex-linked recessive lethals tests in sperm. The experimental procedure was as follows: six days old Canton S males were injected intraabdominally with a 0.1 mg/ml solution of d-Lysergic Acid Diethylamide (0.4 ul per- fly) and mass mated to 6 days old "Basc" virgin females. Half of the males were put in vials with females immediately after the treatment, the other half after a 24 hours interval. In both cases the males were left with the females for one day and then discarded. The females, kept for 12 days, were transferred three times to avoid crowding. Standard recessive lethal tests were done with the F1 females. All lethals scored were retested. The results obtained can be seen in the table.

	No. chrom. tested	% steriles	No. lethals	% lethals
Males mated immediately after treat.	4573	0.91	14	0.30
Males mated 24 hours after treat.	4216	0.61	4	0.09

The data presented here show an increase in the frequency of mutations in the progeny of the males mated immediately after treatment. It is interesting to note that in the other case the frequencies observed do not differ from the ones found in the controls. This might be due to differential sensitivity to the drug as in the first case a larger proportion of cells treated as mature sperm are recovered.

It has been a general procedure, when working with chemical induction of mutations, to wait 24 hours before crossing the treated males. These results (as well as lately published results with irradiated males) point to the convenience of revising such practice.

Ashburner, M. Department of Genetics, University of Cambridge, England & California Institute of Technology. Puff loci in the salivary gland chromosomes of D. melanogaster.

This list of 181 puff loci in the salivary gland chromosomes of D. melanogaster is based on my own observations (Ashburner 1967, 1968a) and those of Becker (1959). It is more complete than those of Lindsley and Grell (1968) and includes all loci which have been observed to puff during the third larval instar and the 12 hour "prepupal" period. Not all of the puffs have been observed in any single stock, for whilst the basic puffing patterns of different stocks of D. melanogaster are essentially similar, genetic variation in puffing activity is found (Ashburner 1968b). Puff loci marked with a single asterisk (*) are puffs known to be developmentally specific -- that is, they are active only at specific periods in development. Puffs marked with a double asterisk (**) are those which have been experimentally induced by temperature shock, during recovery from anoxia or by in vitro treatment of the salivary glands in various media. Unmarked puffs have only been observed sporadically either during normal development or after experimental treatment. The map locations are based on the revised salivary gland chromosome maps of C. B. and P. N. Bridges. This list of puffs is doubtless incomplete and more detailed surveys of limited chromosome regions will discover many small puffs not listed. These puffs will be recognized either by slight variations in the staining intensity of individual bands or by discrete sites of incorporation of tritiated uridine.

Table

Chromosome 1.

*	1C
*	2B5-6
*	2B13-17
*	2EF
	3A1-4
*	3AB
*	3C11-12
*	3E
*	4F9-10
*,**	5B
	6B
	6F
*	7D14-15
*	8D
*	8EF
	9A
*	9EF
*,**	10EF
*	11B14-17
	11E
	12A4-5
*	12E3-7
*	13E1-2
	13E7-16
*	14B
	15A
*	15C3-6
*	16A4-6
*	16C
*	16DE

Chromosome 2.

	21B
*	21C4-6
	21D
*	21F
*	22A
*	22B4-5
*	22B8-9
*	22C3/4-6
*	23C
*	23E
	24E
*	25AC
*	25D
*,**	26AB
	26C
*	27C1-2
*	28C
*	28D
*	29BC
*	29F
*	30A
	30B
	30E
	31A
*	32C5-D1/2
**,*	33B
*	33E
*	34A
*	35A
*	36F
	37F
*	38A
*	42A
	42B
	43B
*	43E
*	44AB
	44F1-2
	45F1-2
*	46A1-2
*	46D
*	46F5-6
*	47A
*	47BC
	47F
*	48A
*	48B
**	48E
	49B
	49D
*	49F
	50A
*	50C6-10
**,*	50C23-D4
*,**	50F
	51D
*	52A
*	52C
	53CD
**	54BC
*	55B
*	55E
*	56D
**	57CD
*	57E
	58A1-3
*	58BC
*	58DE
	59D
*	59F4-8
	60A
*	60B7-13
	60D
	60E

Chromosome 3.

*	61C
*	62A
*	62C
*	62E
*	62F
**	63BC
*	63E
*	63F
*	64A11-13
*	64C9-13
**	64E
	65B
*	66B
*	66E
**,*	67B
*	67F
*	68C
*	69A1-3
**	70A
*	70C
*	70E
*	71AB
*	71CE
*	72CD
*	73B5-7
	73F
*	74EF
*	75B
*	75CD
*	76AB
*	76D
	77AB
*	77E
*	78D
	79D
*	82CD
*	82EF
	83AB
*	83E.
**	84E
**	85B
*	85D1-2
*	85F1-6
	85F10-16
*	86E
**	86F
*,**	87A
**	87B
	87D
*	87F
*	88D
*	88EF
*	89B
*	90BC
*	91B
	92A
*	93B
*,**	93D
*	93F
	94B
	94EF
*	95B
*,**	95D
*	95F
*	96A
*	96E
*	97C
	98B
	98D
*	98F
*	99B
*	99D
*	99E
	100B
*	100DE

Chromosome 4.

	102CD

References: Ashburner, M. 1967. Chromosoma 21, 398.
Ashburner, M. 1968a. Ph.D. thesis, University of Cambridge, and unpublished observations.
Ashburner, M. 1968b. In: "Chromosomes Today" vol. 2 (Darlington and Lewis, eds.), Oliver & Boyd, Edinburgh.
Becker, H. J. 1959. Chromosoma 10, 654.